Universitätsklinikum Bonn, KAI, Venusberg-Campus 1, Gebäude 22, 53127 Bonn

European Association of Cardiothoracic
Anaesthesiology and Intensive Care (EACTAIC)
Education Commitee
Education Chair Prof. Mohamed R. El Tahan, MD

Klinik für Anästhesiologie und Operative Intensivmedizin

Klinikdirektor
Univ.-Prof. Dr. med.
Mark Coburn

Prof. Dr. med.
Markus Velten
Geschäftsführender Oberarzt

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53127 Bonn

23. Dezember 2021

Application EACTAIC Cardioanaesth Fellowship

Dear Prof. El Tahan,

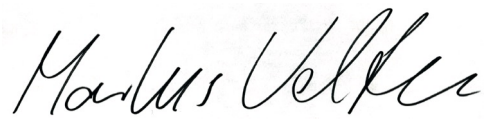
I am writing on behalf of the Department of Anaesthesiology and Critical Care Medicine.

Hereby I apply to become a certified training centre for the EACTAIC Cardioanesthesia Fellowship program. Our adult cardiac surgery programme is one of the decent Center in Germany. Due to the large number of the most complex cardiac surgeries we can insure a specific and most comprehensive education. As we are University Hospital we are also deeply involved in basic and clinical research as you can see from our publication record. Due to the large caseload, we are able to accept one fellow per training year so two fellows per year. We think that cardiac anaesthesia should not be trained in the OR only, but also include the areas of diagnostics and intervention like catheter lab, MRI, CT and Endoscopy. We guarantee a significant caseload including all state of the art procedures in this areas also. Currently, we have 12 full scale carfdiac anaesthesia consultants, 3 residents in training and medical students on a weekly basis in our section.

The cardiac surgery unit is also part of our department and fellowship training includes rotation. Accordingly, training can be guaranteed.

Please do not hesitate contacting me for further information. We are looking forward receiving your evaluation.

Yours sincerely,



Prof. Dr. med. Markus Velten

Ihr Weg zu uns
auf dem UKB-Gelände:
WPAW33

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In order to fulfill the needs for training and education 1 guarantee that the programm leader Prof. Velten will have a minimum of 10% of weekly working time for training the trainees in the Fellowship and Exchange Training Programme of the EACTAIC.

Best Regards

Prof. Dr.med. Mark Coburn

Universitätsklinikum Bonn, KAI, Venusberg-Campus 1, Gebäude 22, 53127 Bonn

Dr. Mohamed El Tahan

Professor and
Education Chair at the European Association of
Cardiothoracic Anaesthesiology (EACTA)

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3. February 2024

Re: Resignation EACTAIC Fellowship Program Director

Dear Dr El Tahan,

Hopefully this email finds you well.

To begin with I would like to thank you for your support and our close cooperation on the EACTAIC fellowship program. Your outstanding contribution made it possible for Bonn to joining the group and establishing the prestigious EACTACI adult cardiac fellowship program at our institution. This would not have been possible for us without your contribution, advice, and most importantly your warm welcoming character. I admire your contribution to the program and am very thankful for all your support and getting you to know over the past years.

I regret to inform you that I accepted the position as Professor and Division Chief of Cardiovascular and Thoracic Anesthesiology at University of Texas Southwestern at Dallas and will leave the University Bonn and unfortunately your program by February 29th. With that said I would like to let you know that being part of the EACTAIC fellowship program and being allowed to serve this program as the fellowship program director meant a lot to me and leaving this is not easy.

However, the Program in Bonn has been established by various faculty that still provide an outstanding contribution without whom continuing would not have been possible.

I discussed the situation with Professor Coburn, the Chairman of the Department and he assured me the importance of the program to the entire institution and advised me to reaching out to you and guarantee his support to the program. Marc Rohner is an outstanding Faculty within the section of cardiac anesthesiology, served as my assistant over the last years and has all credentials, is EACVI certified, and contributed to the agenda you established within the program during your service. Therefore, we suggest Dr. Marc Rohner to become the new EACTAIC adult cardiac fellowship program director at the University Hospital Bonn. Professor Coburn assured to provide him his unrestricted support for this position.

Please don't hesitate contacting me for further questions.

Best wishes

Professor Dr. med. Markus Velten

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European Association of Cardiothoracic
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9. Februar 2024

EACTAIC Adult CTVA Fellowship Director Dr. Marc Rohner

Dear Prof. El Tahan, dear Mohamed,

I confirm to allocate a minimum of 10% of weekly working hours to Dr. Marc Rohner in his role as CTVA Fellowship Programme Director at Bonn University Hospital.

Yours sincerely

Mark Coburn

Univ.-Prof. Dr. med. Mark Coburn
Direktor der Klinik für Anästhesiologie und
Operative Intensivmedizin

Ihr Weg zu uns auf dem UKB-Gelände:

WPAW33

Chirurgisches Zentrum (OPZ) / Geb 22

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www.tuev-sued.de/ms-zert

European Association of Cardiothoracic Anaesthesiology and Intensive Care

Application for Hosting EACTAIC Adult Cardiothoracic and Vascular Anaesthesia Fellowship Programme

1. Fellowship Information

Basic Fellowship in Cardiothoracic and Vascular Anaesthesia

Advanced Fellowship in Cardiothoracic and Vascular Anaesthesia

2. Institution Name

Dep. for Anesthesiology and Critical Care Medicine, University of Bonn

Address: Universitätsklinikum Bonn (UKB)
Klinik für Anästhesiologie und operative Intensivmedizin (KAI)
Venusberg-Campus 1
53127 Bonn

Country: Germany | City: Bonn

3. CEO / Chair Name

First name: Mark | Last name: Coburn

Email: mark.coburn@ukbonn.de | Phone: `+49 228 28714110

4. Programme Director(s)

First name: Markus | Last name: Velten

Board Certification(s): Anaesthesiology, Intensiv care medicin, Emergency medicin, Pain medicin

EACTAIC membership: Yes | If yes, membership's number: 443510

Email: markus.velten@ukbonn.de | Phone: `+49 228 287 14114

Mailing Address: Klinik für Anästhesiologie und operative Intensivmedizin, Universitätsklinikum Bonn | Fax:

Street: Venusberg-Campus 1

Country: Germany | Region: | Bonn

Zip code: 53127

Will the Programme director devote sufficient time to provide substantial leadership to the programme and supervision for the fellows?

Yes

Will the Programme director review the fellows' clinical experience logs at least quarterly and verify completeness and accuracy?

Yes

Does the national/international regulatory authority(s) recognizes the institutional CTVA Fellowship Programme?

Yes | If yes, please explain: Due to the close theoretical and practical similarities of the EACTAIC fellowship program and the DGAI (German Anesthesia Society) definition of an "anesthesiologist experienced in cardioanesthesia", such a certificate is also issued to the fellow by the hosting center

Completion of the programme will be acknowledged by the Department of Anaesthesia and Intensive Care at the host centre in junction with European Association of Cardiothoracic Anaesthesiology and Intensive Care (EACTAIC) Candidate's requirements

Yes

5. Candidate's requirements

The candidates must be board certified or board eligible according to European residency programme standards

Yes

Language requirements: C1 | Comments: German authorietes requests an individual language test even if any certificate is available by the candidate

Specific requirements towards the attending fellow: Candidates must have the German Board Certification (Approbation) and they should have finished their residency training. "Aprobation" is the Geman licence for practicing medicine. If a candidate is Board certified from abroad there is the option to apply for a temporary allowance to practice medicine in Germany.

6. General Programme Information

Aims, goals and objectives of the Fellowship Programme

The Aims, goals and objectives of the Fellowship Program are following the published EACTA Guidlines in the most recent version. We will train non-specialist anaesthesiologists who have finished their residency training to become proficient in cardiothoracic anaesthesia. The fellows will have the opportunity to gain extensive experience in the fields of cardiac surgery and Interventional cardiology. After completion of the programme, they will be able to work independently as consultants in cardiac anaesthesia.

* Of note, the training period should not be interrupted by frequent and/or prolonged periods of secondment to other divisions / departments.

Preferred Programme Training: Start: March 1 | End: February 28

Number of Positions Per Year: 2 | Type of fellowship training available: Clinical / Clinical Research

If clinical, will the fellows be allowed to work with the patients under supervision: Yes

Comments:

Offered Advamced Training: Yes

Name	EACTAIC member	Certification in Cardiothoracic and Vascular Anaesthesia	Additional Qualifications	Email address	Contact address
Programm Director, Markus Velten	Yes	no	CCM, TOE	Markus.Velten@ukbonn.de	like above mentioned postal adress
Faculty Member, Se Chan Kim	Yes	no	CCM, TOE	Se-Chan.Kim@ukbonn.de	like above mentioned postal adress
Faculty Member, Marc Rohner	Yes	no	CCM, TOE	Marc.Rohner@ukbonn.de	like above mentioned postal adress
Faculty Member, Ehrenfried Schindler	Yes	no	CCM, TOE	ehrenfried.schindler@ukbonn.de	like above mentioned postal adress

Publications lists of the faculty's members in PubMed

Attached list of publications

8. Resources Check if each of the following is available at the host centre.

Resources	Yes / No	Days in week	Number
Total cardiothoracic and vascular ward beds	Yes	7	61
Number of ICU beds dedicated to CTV patients	Yes	7	12
Is there an emergency department in which cardiothoracic patients are managed 24 hours a day?	Yes	7	1
An adequately designed and equipped post-anaesthesia care unit for cardiothoracic patients located near the operating room suite?	Yes	7	1
Is there monitoring and advanced life support equipment representative of current levels of technology?	Yes	7	
Hybrid Operating Rooms	Yes	7	1
Cardiac Operating Rooms	Yes	7	3
Thoracic Operating Rooms	Yes	7	1
Vascular Operating Rooms	Yes	7	1
Catheterisation Labs	Yes	7	4
Electrophysiology Labs	Yes	7	1
Pulmonology Labs	Yes	7	2
Interventional Vascular Suits	Yes	7	1
Separate CVICU Facility	Yes	7	
Animal Laboratory for research purposes	Yes	7	3
Outpatient Clinic for perioperative evaluation of patients undergoing cardiothoracic and vascular procedures	Yes	7	
24-hours acute pain service available for patients undergoing cardiac, thoracic and vascular procedures	Yes	7	
Meeting Rooms	Yes	7	
Classrooms with visual and other educational aids	Yes	7	
Study areas for fellows	Yes	7	
Office space for faculty members and fellows	Yes	7	
Diagnostic facilities	Yes	7	
Therapeutic facilities	Yes	7	
24-hour laboratory services available in the hospital	Yes	7	
Cardiac stress testing	Yes	7	
Cardiopulmonary scanning procedures	Yes	7	
Pulmonary function testing	Yes	7	
Computers and IT support	Yes	7	
Appropriate on-call facilities for men and women	Yes	7	

9. Clinical Skills and Responsibilities

Will your Programme offer a 12-24 months of fellowship education in fundamental clinical skills of medicine relevant to the practice of CTVA? Yes

If yes, for each rotation or experience below, specify the duration (in months, four weeks = one month) during the 12-24 months of education in fundamental clinical skills.

Caring for inpatients in	Number of performed produces/year
Cardiac Surgery using CPB	1200
Cardiac Surgery without CPB	300
Minimally-Invasive Cardiac Procedures	600
Interventional Cardiac Catheterization (e.g. TAVI, Mitraclip, TriClip, PFO /ASD closure)	1000
Electrophysiology Lab (e.g. mapping, ablation, pacemakers, ICDs)	700

Robotic Cardiac Surgery	0
Heart, Lung, and Heart/Lung Transplants	0
ECLS, ECMO, VAD Procedures	150
Echocardiography Lab	2000
Thoracoscopic Surgery	700
Pulmonary Resection	150
Oesophageal Surgery	50
Tracheo-Bronchial Surgery	50
Interventional Pulmonology Procedures	150
Major Vascular Procedures	250
Interventional vascular procedures	200
Neurological monitoring during major vascular surgery	250
Acute and chronic pain mangement services	1800 / 1500
Basic or Advanced Research	both

Rotaions in	Number of performed produces/basic rotations	Number of performed produces/advanced rotations
Cardiac anaesthesia	100	100
Thoracic anaesthesia	50	50
Anaesthesia for major supra-inguinal vascular procedures	50	50
Trans-esophageal and trans-thoracic echocardiography	100	100
Medical or surgical Critical Care Rotation	1 month rotation	3-6 month cardiac ICU rotation
Inpatient or outpatient cardiology		
Inpatient or outpatient pulmonary medicine		
Extracorporeal perfusion technology (CPB, ECMO,Nova-Lung.)	80	80
Paediatric cardiothoracic anaesthesia	0	
Basic Research	Every Fellow is strongly supported by the hosting center in participating in ongoing research projects	Every Fellow is strongly supported by the hosting center in participating in ongoing research projects
Clinical Research	Every Fellow is strongly supported by the hosting center in participating in ongoing research projects	Every Fellow is strongly supported by the hosting center in participating in ongoing research projects

Will all fellows entering the CTVA Programme complete each of the fundamental clinical skills of requirements?

If no, explain: Yes

In the clinical anaesthesia setting, including nights and weekends, will faculty members at any time direct perioperative CTVA care, involving fellows, for more than two anaesthetizing locations simultaneously?

If Yes, describe: A minimum one faculty member is present and not directly involved in one to one patient care during the education of fellows. Since there are two fellows at maximum simultaniously, the requirements dioscribed above are fully met.

Clinical Responsibility: Fellows will be involved in clinical routine. Our programm will be built upon the concept of entrustable professional activities. So after onbourding the fellows will start with standard procedures under supervision. After they are comfortable more complex procedures will be performed till they will be able to wor the cases by themself. After this cases will become more complex. However, durung the entire programm they will alswas be a certified consultant in call distance available if needed. The fellows take part in the clinical routine as well as in weekly clinical conferences with the Department of Anaesthesiology, Cardiology, and Cardiac Surgery.
The fellows also take part in preparation and presentation of case conferences, wich are held monthly.

List any other rotations (along with their duration, in months) offered in the Programme to augment fellows' learning.

1 day per week in thoracic and pulmonary surgery during the frist year of fellowship (basic training), approximately 1 day per week clinical resposnsibility for the hybrid operating theatre (interventional cardiology: TAVR, mitral- and tricuspid valve interventions)

Will advanced subspecialty rotations reflect increased responsibility and learning opportunities? Yes

Maximum Time in Non-Clinical Activities: 4 h per week (mostly participating in student teaching)

10. Financial Statement

An employment contract will be signed with the candidate		Yes		
Accommodation options are provided		No		
Transportation/travel options are provided		Yes		
Monthly Salary	Amount	min. 6.178,49	Currency	€
This opportunity is not funded by the centre		No	Source of financial support for the candidate:	Host centre (monthly salary)
			Others	

11. Educational and Academic Programme

Didactic Sessions

Will faculty members' attendance be monitored?	Yes
Will fellows' attendance be monitored?	Yes
Will attendance be mandatory for faculty members?	Yes
Will attendance be mandatory for fellows?	Yes
Who of the following will provide content at conferences? Check all that apply.	Yes
Anaesthesiology faculty members from this department	Yes
Anaesthesiology faculty members from other sites	Yes
Non-anaesthesiologists from the primary clinical site	Yes
Non-anaesthesiologists from the participating sites	Yes
Visiting faculty members	Yes
Drug/industry representatives	No
Fellows	Yes
Others (specify): Click here to enter text.	

What will be the frequency of the following educational topics in the programme's schedule?

	Weekly	Bi-weekly	Monthly	Quarterly	Semi-annually	Annually	Fellows' attendance would be monitored
Critical care appraisal of the literature (i.e., journal club)	Yes	Yes	No	No	No	No	Yes
Quality improvement (M&M, QA)	No	No	Yes	No	No	No	No
Board review (e.g., oral exams, keywords)	No	Yes	No	No	No	No	No
Grand rounds	Yes	No	No	No	No	No	No

Other (specify) Click here to enter text.

There are mandatory weekly lectures on changing topics (mostly on current topics), with additional bi-weekly lectures on rather basic, but nontheless relevant, topics (e.g. cardiovascular physiology, echo basics). During the fellowship a mandatory series of lectures is held containing at least 40 leassons of cardiothoracic-anaesthesia related topics, following the DGAI curriculum on cardiothoracic anaesthesia. the fellows present is monitored. Every Fellow is strongly encouraged to participate in the TTE and the TOE course held annualy at the host center.

Formal Course Work Available in: simulators—which feature a lifesize, lifelike, computer driven mannekin set within a realistic clinical environment—enables the creation of clinical scenarios to examine behavioural aspects of performance. Simulated scenarios involving operating theatre based cases were used to allow participants to put non-technical skills into practice and debriefing was conducted using our established framework to discuss and provide feedback on behavioural aspects of performance. Debriefing will be also used to investigate underlying cognitive processes.

Extra-Institutional Educational Conference Support: Annualy meeting of the German Society of Anaesthesiology and Intensive Care Medicine - Working Group on ardiothoracic anaesthesia. Travel expenses will be covered

The Opportunioty for Exchange with other training facilities: Yes

In the Previous 5 Years, Fellows were 1st or 2nd Author On:

Abstracts		Peer-Reviewed Journal Articles	
Book Chapters		Other Publications	
Dedicated Research Time			

In the Previous Year, Fellows present an oral or poster presentation in a national or international meeting: Yes

Patient Care — CanMEDS competency framework

Technical Skills	Settings/ Activities	Assessment Method(s)
1. I. General patient assessment and risk estimation		
The fellow is enabled to independently examine both elective and emergency patients in a focused manner, to take the medical history and to make a risk assessment adapted to the respective surgical procedure. The fellow is able to communicate an individual risk assessment to the patient and the relatives in a comprehensible and emphatic manner and to inform the patient about the upcoming procedure in a correct manner.	Self-studies and mandatory institutional lectures Regulary participation in pre-operative patient screening and assesment	Clinical skills evaluation and feedback Monthly to quarterly Asessment of the fellow by programm director and faculty
1. II. Anesthesia - Clinical part		
The fellow is able to provide anesthesiological care for all elective surgeries and interventions performed at the Hosting center in the areas of cardiac surgery and interventional cardiology. Both the induction of anesthesia and the administration of general anesthesia and analgosedation are independently mastered. There is a complete user knowledge and professional skill regarding the performance of intraopeartive TOE. Anesthesiologic management of complex emergencies, infrequent procedures, and special cases, such as GUCH, can be largely mastered independently with expert support on call.	Self-studies and mandatory institutional lectures Daily routine in OR Direct supervision in OR Mandatory participation in both basic and advanced TOE course	Clinical skills evaluation and feedback Monthly to quarterly Asessment of the fellow by programm director and faculty
1. II.Postoperative Care / ICU - Clinical part		

The fellow is able to admit and treat a cardiac surgery patient both pre- and post-operatively in the cardiac surgery intensive care unit. All standard intensive care procedures such as differentiated catecholamine therapy, invasive and noninvasive ventilation, enteral and parenteral nutrition, and renal replacement procedures will be mastered on his/her own. The independent care of patients under veno-arterial and veno-venous extracorporeal membrane oxygenation and passive and implanted cardiac assist devices is of particular importance in the training. As well as intraoperatively, an independent assessment of the patient's cardiac function can be performed by using TOE.	Self-studies and mandatory institutional lectures Daily routine on ICU ward Direct supervision on ICU Mandatory participation in both basic and advanced TOE course	Clinical skills evaluation and feedback Monthly to quarterly Asessment of the fellow by programm director and faculty
1. II.Echocardiography - Clinical part		
The Fellow is able to perform a complete TOE examination according to the standard s of the professional societies. He/she is able to collect normal findings as well as pathological findings and to record these findings quantitatively and semi-quantitatively. The basic features of 3D echocardiography are understood. The fellow is able to monitor and guide operative procedures using echocardiographic imaging. Special emphasis will be placed on assessing operative outcomes (e.g., function on prosthetic valves, tightness of patch closures) and specific perioperative situations in cardiovascular anesthesia, such as weaning from CPB or changing intracardiac volumes or pressures.	Mandatory participation in both basic and advanced TOE course Daily routine in OR Daily supervision	Clinical skills evaluation and feedback TOE Exame of The German Society of Anaesthesiology and Intensive Care Medicine
1. VIII. Extracorporeal perfusion management		
The Fellow will be able to perform anesthesiologic management before, during, and after cardiopulmonary bypass. Understand the various forms of CPB performed at the center. The candidate knows the different types of cardioplegic solution and their specificities. Special forms of CPB such as selective cerebral perfusion, deep hypothermic circulatory arrest, as well as retrograde aortic perfusion are known with their particularities.	Self-studies and mandatory institutional lectures Daily routine in OR Direct supervision in OR	Clinical skills evaluation and feedback Monthly to quarterly Asessment of the fellow by programm director and faculty

Medical Knowledge

Fellows are encouraged to actively participate in the weekly training seminars. They are also encouraged to present their own research results at national and international congresses. For this purpose, the fellows are given appropriate time off. The evaluation takes place in a personal conversation with the programme director.

Area of Knowledge	Settings/ Activities	Assessment Method(s)
1. Basic Training		
1.I. General patient assessment and risk estimation (Level A)		
Physiology of the heart, the circulatory system and the respiratory system. Basic knowledge of embryological development of cardiac, thoracic and vascular structures.	Self-studies and mandatory institutional lectures	Asessment of the fellow during daily working routine in OR
Pre-operative invasive and non-invasive assessment of cardiac diseases and interpretation of results including electrocardiogram (ECG), chest X-ray, echo-cardiography, cardiac stress testing, coronary angiography, cardiac magnetic resonance imaging (cMRI), and computer tomography (CT).	Regulary participation in pre-operative patient screening and assesment	Clinical skills evaluation and feedback
Pre-operative pulmonary evaluation and interpretation of the results, including arterial blood gas and acid-base analysis, pulmonary function tests, oximetry and thoracic imaging.	Regulary participation in pre-operative patient screening and assesment	Clinical skills evaluation and feedback
Patient information and informed consent including medico-legal aspects, appraisal of discernment and consent capacity.	Regulary participation in pre-operative patient screening and assesment	Clinical skills evaluation and feedback
Principles of risk and outcome assessment and relevant scoring systems (e.g., EuroSCORE).	Participation in weekly interdsciplinary case conferences	Monthly to quarterly Asessment of the fellow by programm director and faculty
1. II. Anesthesia management – cardiac surgery (Level A)		
Knowledge of anesthetic agents and their effects on cardiac function and in patients with cardiac diseases.	Self-studies and mandatory institutional lectures	Clinical skills evaluation and feedback
Principles of intraoperative pharmacology and relevant medication, including positive inotropes, chronotropes, vasoconstrictors, vasodilators, and anti-arrhythmic agents.	Self-studies and mandatory institutional lectures	Clinical skills evaluation and feedback Monthly to quarterly Asessment of the fellow by programm director and faculty
Principles of patient blood management, including specific diagnostic tools, application of relevant medication and blood products.	Self-studies and mandatory institutional lectures	Clinical skills evaluation and feedback Monthly to quarterly Asessment of the fellow by programm director and faculty
Principles of basic hemodynamic monitoring and relevant techniques, such as arterial pressure measurement, central venous pressure.	Self-studies and mandatory institutional lectures	Clinical skills evaluation and feedback Monthly to quarterly Asessment of the fellow by programm director and faculty
Principles of relevant neuromonitoring techniques (e.g., processed electro-encephalography (pEEG), near-infrared sonography (NIRS), somato-sensible evoked potentials (SSEP), motor evoked potentials (MEP).	Self-studies and mandatory institutional lectures	Clinical skills evaluation and feedback Monthly to quarterly Asessment of the fellow by programm director and faculty
Principles of conventional cardiopulmonary bypass techniques. Principles of myocardial preservation. Effects of cardiopulmonary bypass on human physiology, organ function, and pharmacology.	Self-studies and mandatory institutional lectures	Clinical skills evaluation and feedback Monthly to quarterly Asessment of the fellow by programm director and faculty
Basic principles of common procedures in cardiac surgery, such as coronary artery bypass grafting (CABG).	Self-studies and mandatory institutional lectures	Clinical skills evaluation and feedback Monthly to quarterly Asessment of the fellow by programm director and faculty
1. III. Anesthesia management – thoracic surgery (Level A)		
Principles of pulmonary evaluation as described previously, and basic knowledge in the interpretation of results from pulmonary function tests, lung perfusion testing and CT.	Self-studies and mandatory institutional lectures Fellows performing pulmonary function tests on cardiothoracic patients during preoperativ patient screening and asessment	Clinical skills evaluation and feedback
Knowledge of the bronchial anatomy.	Self-studies and mandatory institutional lectures	Clinical skills evaluation and feedback Monthly to quarterly Asessment of the fellow by programm director and faculty
Knowledge about relevant anesthetic agents and their effects in patients with lung diseases.	Self-studies and mandatory institutional lectures	Clinical skills evaluation and feedback Monthly to quarterly Asessment of the fellow by programm director and faculty
Principles of intraoperative pharmacology and relevant medication, including bronchodilators and steroids.	Self-studies and mandatory institutional lectures	Clinical skills evaluation and feedback Monthly to quarterly Asessment of the fellow by programm director and faculty
Basic principles of common procedures in thoracic surgery (mediastinoscopy, video-assisted thoracoscopic surgery (VATS), open lung resection, pneumonectomy).	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly Asessment of the fellow by programm director and faculty
Basic principles of endoscopic pulmonary procedures, such as bronchial stenting and endoscopic lung volume reduction (ELVR).	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly Asessment of the fellow by programm director and faculty
1. IV. Anesthesia management – major vascular surgery (Level A)		
Knowledge of peri-operative management for vascular patients undergoing vascular interventions, including anesthetic choices, perioperative monitoring, and risk identification.	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly Asessment of the fellow by programm director and faculty
Basic principles of the peri-operative management of lumbar drainage for aortic interventional procedures.	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly Asessment of the fellow by programm director and faculty
Basic principles of spinal cord protection during surgical and interventional aortic procedures.	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly Asessment of the fellow by programm director and faculty
Basic principles of neuromonitoring.	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly Asessment of the fellow by programm director and faculty
1. V. Post-operative care/ Critical care (Level A)		
Scoring systems in the ICU (e.g. the Sequential Organ Failure Assessment (SOFA), the Simplified Acute Physiology Score (SAPS), the Confusion Assessment Method (CAM)-ICU).	Self-studies and mandatory institutional lectures Bed-site eaching on ICU	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Etiology, pathophysiology, diagnosis and treatment plans / bundles according to international standards for specific critical conditions in cardiothoracic and vascular surgery patients.	Self-studies and mandatory institutional lectures Bed-site eaching on ICU	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Circulatory failure (heart failure, shock, cardiorespiratory arrest, cardiac arrhythmias, ischemic heart disease, pulmonary embolism, bleeding complications, vasoplegia).	Self-studies and mandatory institutional lectures Bed-site eaching on ICU	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Anaphylaxis.	Self-studies and mandatory institutional lectures Bed-site eaching on ICU	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Respiratory failure, including adult respiratory distress syndrome (ARDS), pulmonary edema, pneumothorax, pneumonia.	Self-studies and mandatory institutional lectures Bed-site eaching on ICU	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Acute kidney injury and failure.	Self-studies and mandatory institutional lectures Bed-site eaching on ICU	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Gastrointestinal failure, peritonitis, pancreatitis, liver failure, non-occlusive mesenteric ischemia (NOMI).	Self-studies and mandatory institutional lectures Bed-site eaching on ICU	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Neurological failure (delirium and coma, cerebral ischemia and bleeding).	Self-studies and mandatory institutional lectures Bed-site eaching on ICU	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Airway and chest injuries.	Self-studies and mandatory institutional lectures Bed-site eaching on ICU	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Aortic injuries.	Self-studies and mandatory institutional lectures Bed-site eaching on ICU	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Infectious diseases (systemic inflammatory response syndrome (SIRS) and sepsis, including sepsis bundle strategy).	Self-studies and mandatory institutional lectures Bed-site eaching on ICU	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Coagulation disorders (disseminated intravascular coagulopathy (DIC), heparin resistance, heparin-induced thrombocytopenia, severe bleeding, transfusion reaction).	Self-studies and mandatory institutional lectures Bed-site eaching on ICU	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Equipment and apparatus (equipment design, physics, standards, limitations; e.g. non-invasive and invasive postoperative ventilation, continuous renal replacement therapy devices, non-invasive and invasive hemodynamic monitoring).	Self-studies and mandatory institutional lectures Bed-site eaching on ICU	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty

Indication, contraindication, drug selection, complications: sedation, anesthesia, analgesia, neuromuscular relaxation, nutrition.	Self-studies and mandatory institutional lectures Bed-site eaching on ICU	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Multimodal and pre-emptive analgesia concepts.	Self-studies and mandatory institutional lectures Bed-site eaching on ICU	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Weaning and extubation criteria.	Self-studies and mandatory institutional lectures Bed-site eaching on ICU	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Transfer and discharge criteria.	Self-studies and mandatory institutional lectures Bed-site eaching on ICU	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Indications for and application of extracorporeal circulation in intensive care patients for cardiac and / or respiratory support (e.g., ECMO).	Self-studies and mandatory institutional lectures Bed-site eaching on ICU	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
1. VI. Basic peri-operative echocardiography (Level A)		
Principles of basic theory of peri-operative cardiac echocardiography according to the European Association of Cardiovascular Imaging (EACVI) / EACTAIC process of certification for TEE.	Mandatory participation in both basic and advanced TOE course Daily routine in OR Daily supervision	Clinical skills evaluation and feedback TOE Exame of The German Society of Anaesthesiology and Intensive Care Medicine
1. VII. Anesthesia management – interventional procedures in cardiology (Level A)		
Basic principles of common procedures in interventional cardiology, such as coronary angiography, ablation, transcatheter aortic valve replacement (TAVR), and mitral / tricuspid clipping with relevant complications.	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Procedural sedation guidelines from the European Board of Anaesthesiology (EBA)/ European Society of Anaesthesiology (ESA).	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Monitoring and capnography use according to the safety recommendations from EBA.	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
1. VIII. Extracorporeal perfusion management (Level A)		
Basic principles of extracorporeal perfusion.	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Types of extracorporeal circuits, e.g., cardiopulmonary bypass (CPB), extracorporeal membrane oxygenation (ECMO).	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Types, composition and mechanisms of cardioplegic solutions.	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Cardioprotective measures.	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Safety recommendations for extracorporeal circulation from the European Board of Cardiovascular Perfusion (EBCP).	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
2. Advanced training		
2. I. Anesthesia management – cardiac surgery (Level A)		
Principles of advanced hemodynamic monitoring and relevant techniques, such as use of the pulmonary artery catheter, continuous cardiac output monitoring and measurement.	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Principles of modified cardiopulmonary bypass (minimized CPB, left-heart CPB) and the off-pump revascularization technique.	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Principles of advanced procedures in cardiac surgery and clinical management of affected patients (valve surgery and thoracic aortic surgery, including ascending, transverse, and descending aortic surgery with circulatory arrest).	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Principles and state of the art of mechanical support including intra-aortic balloon pumps, and extracorporeal membrane oxygenation.	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Current state of temporary and long-term mechanical circulatory support (ventricular assist devices, total artificial hearts).	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Principles of use of inhaled pulmonary vasodilators (nitric oxide (NO), prostaglandins).	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Principles of fast-track surgery.	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
2.II. Anesthesia management – thoracic surgery (Level A)		
Principles of common procedures in thoracic surgery (open and thoracoscopic lung resections, robotic lung resection, lung volume reduction surgery, mediastinoscopy, pneumonectomy).	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Principles of diagnostic and interventional bronchoscopic surgery (lung volume reduction, bronchopulmonary lavage; endoscopic, rigid fiber optic and laser resection; bronchial stenting and sealing).	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Principles of peri-operative management of esophageal surgery for varices, neoplastic, colon interposition, foreign body, stricture, and tracheoesophageal fistula.	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
2. III. Anesthesia management – major vascular surgery (Level A)		
Knowledge of perioperative management of TEVAR and EVAR.	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Knowledge of the principles of perioperative management of lumbar drainage for aortic interventional procedures.	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Excellent knowledge of the principles of spinal cord protection during surgical and interventional aortic procedures.	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Excellent knowledge of the principles of cerebral function monitoring.	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
2. IV. Post-operative management/ Critical care (Level A)		
Knowledge of cardiac and thoracic physiology.	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Postoperative cardiac critical care, including analgesia, sedation and ventilation.	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
Postoperative care and analgesia after thoracic surgery.	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
An understanding of the management of cardiac pacing modes.	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
An understanding of extracorporeal membrane oxygenation and other devices used for mechanical circulatory support.	Self-studies and mandatory institutional lectures Bed-side teaching in OR	Clinical skills evaluation and feedback Monthly to quarterly asessment of the fellow by programm director and / or faculty
2. VII. Advanced perioperative echocardiography (Level A)		
Advanced level of knowledge in peri-operative cardiac echocardiography according to the EACVI/ EACTAIC process of certification guidelines.	Mandatory participation in both basic and advanced TOE course Daily routine in OR	Clinical skills evaluation and feedback TOE Exame of The German Society of Anaesthesiology and Intensive Care Medicine
2. VIII. Heart and/or lung transplantation (Level A)		
Understanding of the physiology and clinical presentations of end-stage heart and lung disease and surgical options for their management.	Self-studies and mandatory institutional lectures	Monthly to quarterly asessment of the fellow by programm director and / or faculty
Understanding of the principles of heart transplantation and clinical management of affected patients.	Self-studies and mandatory institutional lectures	Monthly to quarterly asessment of the fellow by programm director and / or faculty
Knowledge of current limitations of organ transplantation and efforts to increase the suitable donor pool.	Self-studies and mandatory institutional lectures	Monthly to quarterly asessment of the fellow by programm director and / or faculty
Understanding of the multidisciplinary nature of patient evaluation and listing for transplantation.	Self-studies and mandatory institutional lectures	Monthly to quarterly asessment of the fellow by programm director and / or faculty
Knowledge of the principles of donor optimization, management and allograft retrieval.	Self-studies and mandatory institutional lectures	Monthly to quarterly asessment of the fellow by programm director and / or faculty
Knowledge of the principles of ex-vivo heart and lung perfusion.	Self-studies and mandatory institutional lectures	Monthly to quarterly asessment of the fellow by programm director and / or faculty
Understanding of the physiology of the denervated organ.	Self-studies and mandatory institutional lectures	Monthly to quarterly asessment of the fellow by programm director and / or faculty
Understanding of the surgical conduct of heart transplantation and knowledge of intra-operative and immediate postoperative care, including stability of induction, ventilation, oxygenation, hemodynamic support, and allograft and noncardiac organ protection.	Self-studies and mandatory institutional lectures	Monthly to quarterly asessment of the fellow by programm director and / or faculty
Understanding of primary graft dysfunction and indications for mechanical circulatory support.	Self-studies and mandatory institutional lectures	Monthly to quarterly asessment of the fellow by programm director and / or faculty
Understanding of the surgical options for lung transplantation, including minimally invasive lung transplantation and various intraoperative extracorporeal support mechanisms.	Self-studies and mandatory institutional lectures	Monthly to quarterly asessment of the fellow by programm director and / or faculty

Knowledge of intra-operative and immediate postoperative care, including protective ventilation, oxygen delivery, hemodynamic support, indications for inhaled NO and other pulmonary vasodilators, allograft and non-pulmonary organ protection.	Self-studies and mandatory institutional lectures	Monthly to quarterly asessment of the fellow by programm director and / or faculty
Knowledge of the principles of primary lung dysfunction and conservative and extracorporeal treatment options, including indications for and techniques of ECMO.	Self-studies and mandatory institutional lectures	Monthly to quarterly asessment of the fellow by programm director and / or faculty
Understanding of immunosuppressive regimens and the role of postoperative infections and sepsis.	Self-studies and mandatory institutional lectures	Monthly to quarterly asessment of the fellow by programm director and / or faculty
2. IX. Research module (Level A)		
Principles of clinical trials, including design, end points, inclusion / exclusion criteria, reporting requirements.	Self-studies and mandatory institutional lectures	Monthly held scientific meetings of the centers various working groups
Understanding of Good Clinical Practice (GCP) requirements for clinical research involving patients.	Self-studies and mandatory institutional lectures	Monthly held scientific meetings of the centers various working groups
Understanding of European and specific national ethics frameworks, including research ethics applications, clinical regulatory frameworks and hospital site-specific assessment.	Self-studies and mandatory institutional lectures	Monthly held scientific meetings of the centers various working groups
Principles of sample size and study power determinations and basic statistical evaluation	Self-studies and mandatory institutional lectures	Monthly held scientific meetings of the centers various working groups
Principles of patient and data confidentiality agreements.	Self-studies and mandatory institutional lectures	Monthly held scientific meetings of the centers various working groups
Understanding tools for data collection, analysis and reporting.	Self-studies and mandatory institutional lectures	Monthly held scientific meetings of the centers various working groups
Principal international basic science priorities in the field of cardiac anesthesia.	Self-studies and mandatory institutional lectures	Monthly held scientific meetings of the centers various working groups
Ethics and practicalities of biological sample collection, storage and biobanking	Self-studies and mandatory institutional lectures	Monthly held scientific meetings of the centers various working groups
Principles and ethics of scientific publishing.	Self-studies and mandatory institutional lectures	Monthly held scientific meetings of the centers various working groups

12. Assessment

The Programme Director will evaluate each fellow every 3 months as per EACTAIC regulations
https://www.eactaic.org/wp-content/uploads/2020/11/EACTA-Three-Monthly-Evaluation_09.11.2020.pdf — Yes

Assessment tools

360-degree evaluations	Yes	Clinical skills evaluations	Yes
Personal reports from the faculty	Yes	Self-assessment by Fellow	Yes
Learning goals for the next three months	Yes	Feedback from Fellows	Yes
A logbook will be available	Yes	Reports of Evaluation will be available	Yes

The Programme Director will give an appraisal for each fellow every 3 months	Yes
The faculty and trainee should agree a joint evaluation both fellow's progress and the training programme, and devise a plan for addressing any perceived difficulties or deficiencies.	Yes
Training programmes should encourage fellows to provide a written confidential evaluation of the programme.	Yes
External evaluation / assessment will be held as per EACTAIC regulations	Yes
The centre will be able to maintain a register of those fellows who have entered and successfully completed a training programme in order to continue its accreditation as a training centre	Yes
There will be regular opportunities for Fellows to provide confidential written evaluations of the faculty and program to the EACTAIC Education Chair	Yes
Periodic evaluation of patient care (quality assurance) is mandatory. Subspecialty trainees in cardiac, thoracic, and vascular anesthesia will be involved in continuing quality improvement and risk management.	Yes
Trainees in cardiac, thoracic and vascular anesthesia will actively participate in the periodic evaluation and reassessment of the Fellowship training goals and objectives	Yes
Should unforeseen circumstances arise such as personal conflict between a Fellows and tutors, this should be reported immediately to the Chair of the Education Committee.	Yes
At the end of the training period, the centre would acknowledge in writing successful completion of a fellow training.	Yes

13. Practice-based Learning and Improvement

1. Briefly describe the main learning activities regarding non-clinical skills and their assessment during the fellowship

The department has access to a skills lab for simulation and interpersonal training. The Fellow will be encouraged to participate in simulation trainings.

2. Briefly describe one planned learning activity in which fellows engage to: identify strengths, deficiencies, and limits in their knowledge and expertise (self-reflection and self-assessment); set learning and improvement goals; and identify and perform appropriate learning activities to achieve self-identified goals (life-long learning).

Due to the standardized procedures and high internal comparability of the anesthesiological and surgical measures, it is possible to slowly and steadily introduce the candidate to a learning goal. Step by step, additional tasks can be transferred to the responsibility of the fellow.
Both the fellow and the trainer can notice individual improvements through recurring procedures. The trainee is asked to retrospectively evaluate the individual learning stages and assess his or her own progress. In a direct feedback session, the trainer will be able to take corrective action and encourage the trainee to strive for further learning steps.

3. Briefly describe one planned quality improvement activity or project that will allow the fellows to demonstrate an ability to analyse, improve and change practice or patient care. Describe planning, implementation, evaluation and provisions of faculty support and supervision that will guide this process.

Continuous development of anesthesiological management is taking place, for example, in the process flows of ERAS concepts. Here, the quality of anesthesia management becomes particularly apparent as a function of the surgical measures. Independent of SOPs, candidates can be enabled to expand their individual planning and expansion of fast-track and ultra-fast-track measures step by step.
The quality of the preparatory measures is shown very directly and thus shows the Fellow the direct impact of his actions.

4. Briefly describe how fellows will receive and incorporate formative evaluation feedback into daily practice

After each anesthesia performed, a brief discussion is held with the senior physician responsible for the unit.
Fellows are encouraged to perform postanesthesiology rounds on their patients in the ICU at the end of the workday.
All fellows are encouraged to participate in the morning interdisciplinary intensive care rounds.

5. Briefly describe one example of a learning activity in which fellows engage to develop the skills needed to use information technology to locate, appraise, and assimilate evidence from scientific studies and apply it to their patients' health problems. The description should include:

Fellows are encouraged to attend a cardioanesthesiology conference at least once a year. There is strong support from the Department of Anesthesiology to do this actively in the form of poster presentations or lectures.

6. Briefly describe how fellows will participate in the education of patients, families, students, fellows, and other health professionals.

Almost daily, bedside training of students takes place in the Department of Anesthesiology. All employees of the department are contractually obligated to contribute up to 4 working hours per week to the continuous teaching.

14. Interpersonal and Communication Skills

1. Briefly describe one learning activity in which fellows demonstrate competence in communicating effectively with patients and families across a broad range of socioeconomic and cultural backgrounds, and with physicians, other health professionals, and health-related agencies.

During the pre-anaesthetic visit, the fellows are oriented to inform patients and family the best way possible, of all the risks that patient will be submitted and the alternative treatments that may occur as a result of adverse events. During the pre-operative screening process the fellow learns by attending the consultation hours at least one time per month. After an initial period where the candidate will be accompanied by a member of the staff the candidate will be expected to work independently with a back up from an experienced consultant

2. Briefly describe one learning activity in which fellows demonstrate their skills and habits to work effectively as members or leaders of a health care team or other professional group. In the example, identify the members of the team, responsibilities of the team members, and how team members communicate to accomplish responsibilities.

In the context of ongoing interprofessional trainings, skills as leadership, crew resource management and team communication are already tought by now. These trainings are well established in our Department.

4. Briefly describe how fellows will be provided with opportunities to maintain comprehensive, timely, and legible medical records, if applicable

The fellow will have full access / credentials to the preop clinic and inpatients electronic records.

During OR rotations, the fellow will be asked to fill in the written operating summary and handover for cardiac cases. We work with a standardised electronic handover checklist following the SBAR concept. The intensive care unit documentation, as well as the anaesthesia protocol in the OR are computed by the PDMS, where hemodynamic measures as well as ventilator settings are being transferred automatically into the electronic reports. Other data, such as medica-tion, fluids, lines, tubes and others have to be chosen out of a menu and confirmed manu-ally to get transferred into the record. SBAR improves communication strategies and team performance, as well as team communication skills between doctors and nurses, which increases patient safety. But it does require team training in use and communication and thats what the fellow will learn

5. Briefly describe how fellows will maintain a comprehensive anaesthesia record for each patient, including evidence of pre- and post-operative anaesthesia assessment, an ongoing reflection of the drugs administered, the monitoring employed, the techniques used, the physiologic variations observed, the therapy provided as required, and the fluids administered.

The University has a comprehensive PDMS in the OR as well as on the ICU. We call ourselfs "paperless hospital" that means the fellow will learn a lot about clinical information systems including electronic anesthesia records, Echo data management, and even online patient informed consent.

6. Briefly describe how fellows will create and sustain a therapeutic relationship with patients, engage in active listening, provide information using appropriate language, ask clear questions, provide an opportunity for comments and questions, and demonstrate sensitivity and responsiveness to cultural differences, including awareness of their own and their patients' cultural perspectives.

In the preop anesthesia clinic, the fellow will always have to communicate with patients with different backgrounds.
During the Operation, the fellow will be supervised while communicating with the surgeon, the perfusionist and the nurses. Additionally the fellow will be asked to take actively part in the regular conferences and learn how to present patient records

15. Professionalism

Briefly describe the learning activity(ies), other than lecture, by which fellows demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles, including: compassion, integrity, and respect for others; responsiveness to patient needs that supersedes self-interest; respect for patient privacy and autonomy; accountability to patients, society, and the profession; and sensitivity and responsiveness to a diverse patient population, including to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation

There is no dedicated programm were fellows can learn about a commitment to carry out professional responsibilities and an adherence to ethical principles, including: compassion, integrity, and respect for others; responsiveness to patient needs that supersedes self-interest; respect for patient privacy and autonomy. But the department has a written code of general orientation and the staff member will be tought about these basic principles. One can call that learning by guidance.

15. Systems-based Practice

1. Describe the learning activity(ies) through which fellows achieve competence in the elements of systems-based practice: working effectively in various health care delivery settings and systems, coordinating patient care within the health care system; incorporating considerations of cost-containment and risk-benefit analysis in patient care; advocating for quality patient care and optimal patient care systems; and working in inter-professional teams to enhance patient safety and care quality

The fellow will plan and demonstrate a clinical case at the conference. So, he/she has to do a literature research first and use information technology for that.
Further, the fellow has the opportunity to collaborate in clinical research or academic projects. The University has an own Department for patient safety. one could think of getting in touch with this department and let the fellow participate in a quality mangement programm. The fellow, as a member of the anaesthesiology team, should show competencies in working with the various health care delivery settings and systems, coordinating patient care within the health care system with paying attention to the cost-containment and risk-benefit analysis in patient care.

16. EACTAIC Site Visit (for 1-day)

Dates proposed for the visit (at least 3) 23/03/2022 or 30/03/2022 or 02/04/2022

I hereby accept the regulations of the Hospital Visiting especially to take in charge the travel costs and the hotel accommodation of the 2 reviewers on the most reasonable base

Yes

To be completed by the Head of department or the authorised deputy.

Please fill in all required fields and send to eactaic@aimgroup.eu and EACTAIC Education Chair

European Association of Cardiothoracic Anaesthesiology and Intensive Care

Checklist for Hosting EACTAIC Paediatric Cardiothoracic Anaesthesia Fellowship Programme

Institution Name	Dep. for Anesthesiology and Critical Care Medicine, University of Bonn
Address	Universitätsklinikum Bonn (UKB) Klinik für Anästhesiologie und operative Intensivmedizin (KAI) Venusberg-Campus 1 53127 Bonn
Preferred Duration	☒ **12 - 24 months**

Type of fellowship training available:

- ☐ Clinical only
- ☐ Clinical / Basic Research
- ☒ Clinical / Clinical Research
- ☐ Basic Research only
- ☐ Clinical Research only

Financial Statement

**** The financial sources policy should be declared by the host centre.**

**** There should be a clear consensus between the host centre and the trainee about the financial statement before joining the programme.**

An employment contract will be signed with the candidate ☒ Yes ☐ No

Accommodation options are provided ☐ Yes ☒ No

Transportation/travel options are provided ☒ Yes ☐ No

Monthly Salary: **Amount** min. 6.178,49 **Currency** Euro

The centre does not fund this opportunity ☐ Yes ☒ No

Source of financial support for the candidate:

- ☐ Host centre (monthly salary)
- ☐ Candidate ‘s centre
- ☐ Scholarship
- ☐ Educational grant
- ☐ Award
- ☐ Candidate’s expenses
- ☐ Others

Please, describe: Click here to enter text.

Programme Training and facilities of the host centre

1.	The fellow should be authorized to provide direct patient care during their training programme under the supervision of the programme director and faculty’s members, “i.e. hands-on practice.”	☒ Yes	☐ No
2.	Declaration of financial recourses and signed agreement between the host centre and trainee.	☒ Yes	☐ No
3.	Uninterrupted training for 12months.	☒ Yes	☐ No
4.	The head of the department or other advisory authority should approve the programme.	☒ Yes	☐ No
5.	The programme director should attain sufficient time to do his responsibilities.	☒ Yes	☐ No

If yes, please define

Click here to enter hours per day

10% of working1 days per week

Click here to enter days per month

6.	At least two faculty members should be involved.		☒ Yes	☐ No
7.	Evaluation should be done every four months.		☒ Yes	☐ No
8.	A portfolio/logbook will be performed monthly and signed by the programme director		☒ Yes	☐ No
9.	The hosting centres should have:		☒ Yes	☐ No
	9. 1	Available adult ward beds for cardiothoracic and vascular patients.	☒ Yes	☐ No
	9. 2	Available PICU beds dedicated to cardiothoracic and vascular patients	☒ Yes	☐ No
	9. 3	Is there an emergency department in which cardiothoracic patients are managed 24 hours a day?	☒ Yes	☐ No
	9. 4	Are adult patients with CHD managed in the host centre?	☒ Yes	☐ No
	9. 5	Is there monitoring and advanced life support equipment representative of current levels of technology?	☒ Yes	☐ No
	9. 6	Available an outpatient Clinic for perioperative evaluation of patients undergoing cardiothoracic and vascular procedures	☒ Yes	☐ No
	9. 7	24-hours acute pain service available for patients undergoing different procedures	☒ Yes	☐ No
	9. 8	Available Meeting Rooms	☒ Yes	☐ No
	9. 9	Available classrooms with visual and other educational aids	☒ Yes	☐ No
	9. 10	Available study areas for fellows	☒ Yes	☐ No
	9. 11	The volume of cases. *		
		9. 5. 1 Minimum of 100 adult cardiac surgery per calendar year. (The majority with using the CPB)	☒ Yes	☐ No
		9. 5. 2 Minimum of 50 cardiac interventional procedures.	☒ Yes	☐ No
		9. 5. 3 Minimum 25 thoracic cases. .	☒ Yes	☐ No
		9. 5. 4 Minimum 25 vascular cases.	☒ Yes	☐ No
		9. 5. 5 Available simultaneous management of paediatrics with congenital heart disease (CHD).	☒ Yes	☐ No
		9. 5. 6 Accessibility for training in the electrophysiology procedures on adult patients.	☒ Yes	☐ No
		9. 5. 7 Accessibility for training in the dedicated adults intensive care unit for one month.	☒ Yes	☐ No
		9. 5. 8 Accessibility for training on the Extracorporeal perfusion or ECLS technology (CPB, ECMO)	☒ Yes	☐ No
		9. 5. 9 Accessibility for training on the basic and/or clinical research	☒ Yes	☐ No

Decision ☐ Approve ☐ Reject
Conditions ☐ Yes ☐ No

If yes, please define Click here to enter text.

Submit

Please fill in all required fields and send them to eactaic@mci-group.com

EACTAIC Adult Cardiothoracic and Vascular Anaesthesia Fellowship Programme

Department of Anesthesiologie and Intensive Care Medicin, University Hospital Bonn

Klinik für Anästhesiologie & Operative Intensivmedizin

Day of week / Operation area	Monday	Tuesday	Wednesday	Thursday	Friday
Cardiothoracic OR 1	Conventional coronary bypass and valve surgery	Conventional coronary bypass and valve surgery	Conventional coronary bypass and valve surgery	Conventional coronary bypass and valve surgery	Conventional coronary bypass and valve surgery
Cardiothoracic OR 2	Off-pump bypass surgery (OPCAP, MIDCAB)	Off-pump bypass surgery (OPCAP, MIDCAB)	Off-pump bypass surgery (OPCAP, MIDCAB)	Off-pump bypass surgery (OPCAP, MIDCAB)	Off-pump bypass surgery (OPCAP, MIDCAB)
Cardiothoracic OR 3	Heart valve surgery	Heart valve surgery	GUCH surgery	Heart valve surgery	Heart valve surgery
Hybrid Operation Room	Interventional Valve Procedures (TAVR, MitraClip, Cardioband)	Interventional Valve Procedures (TAVR, MitraClip, Cardioband)	Interventional Valve Procedures (TAVR, MitraClip, Cardioband)	Interventional Vascular Surgery (EVAR, TEVAR)	Interventional Valve Procedures (TAVR, MitraClip, Cardioband)
Thoracic / Vascular Surgery Operation Theatre	Pulmonary surgery (VATS)	Vascular surgery	Vascular surgery	Visceral surgery (e.g. oesophageal surgery)	Pulmonary surgery (VATS)
Cardiothoracic ICU	7:00 interdisciplinary ICU round	7:00 interdisciplinary ICU round		7:00 interdisciplinary ICU round	7:00 interdisciplinary ICU round
Other		16:00 weekly interdisciplinary Converence	7:15 mandatory instiutional lectures	16:00 biweekly mandatory basic lectures	16:00 monthly interdisciplinary GUCH conference

This is an example of a weekly schedule during the fellow's cardiac anesthesia rotation period at the hosting center.

Each day our department provides anesthesia for 3 cardiac surgery operating rooms, one Hybrid OR and at least one vascular surgery and one pulmonary surgery operating room.